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Notice of Allowability	Application No.	Applicant(s)	
	10/688,723	MAY, RANDY DEAN	
	Examiner	Art Unit	
	Frederick F. Rosenberger	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed on 21 August 2006.
2. ☒ The allowed claim(s) is/are 2-9 and 21-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|---|

DETAILED ACTION

Response to Amendment

1. Applicant's reply, filed 21 August 2006, has been received and entered. Accordingly, claims 2-9 have been amended. Claims 1 and 10-20 have been cancelled. Claims 22-33 have been added. Thus, claims 2-9 and 21-33 are currently pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Carl Kukkonen, III (Reg. No. 42,773) on 11 September 2006.

The application has been amended as follows:

Claim 23 (Currently Amended) A system comprising:

Means for chemically detecting a level of water vapor in natural gas;

Means for optically detecting a level of water vapor in natural gas, the means for optically detecting a level of water vapor in natural gas comprising:

Means for emitting light at substantially a single wavelength having a width sufficiently narrow to conduct single line spectroscopy and corresponding to a single

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absorption line at which water molecules absorb light at a substantially greater level than natural gas molecules;

Means for detecting an intensity of light emitted from said means for emitting light; and

Calculation means for determining the level of water vapor in the natural gas using single line spectroscopy; and

A supply line delivering natural gas to the ~~at least one chemical sensor~~ means for chemically detecting a level of water vapor in natural gas and the ~~at least one optical sensor~~ means for optically detecting a level of water vapor in natural gas for parallel measurements.

Claim 31 (Currently Amended) The system of claim 24 23 wherein said means for emitting light operates substantially at a wavelength selected from a group comprising: 2.711-2.786 μm .

Claim 33 (Currently Amended) A system comprising: ~~and~~

A chemical sensor to detect a level of water vapor in natural gas ~~mounted in parallel to the optical sensors~~; means for optically detecting a level of water vapor in natural gas mounted in parallel to the chemical sensor, the means for optically detecting a level of water vapor in natural gas comprising:

Means for emitting light at substantially a single wavelength having a width sufficiently narrow to conduct single line spectroscopy and corresponding to a single

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absorption line at which water molecules absorb light at a substantially greater level than natural gas molecules;

Means for detecting an intensity of light emitted from said means for emitting light; and

Calculation means for determining the level of water vapor in the natural gas using single line spectroscopy[[:]].

Allowable Subject Matter

3. Claims 2-9 and 21-33 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The reasons for allowance for independent claim 21 have been previously made of record in the Office action mailed 11 August 2006. Claims 2-9 and 22 are allowed by virtue of their dependence on claim 21.

With regards to claim 23, the prior art fails to teach or reasonably suggest the combination of a means for chemically sensing the level of water vapor in natural gas and a means for optically sensing the level of water vapor in natural gas for making parallel measurement of the level of water vapor in natural gas. Thus, claim 23 and associated dependent claims 24-32 are allowed.

With regards to claim 33, the prior art fails to teach or reasonably suggest the combination of a chemical sensor and a means for optical detecting a level of water

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vapor in natural gas, mounted in parallel, for detecting a level of water vapor in natural gas. Thus, claim 33 is allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick F. Rosenberger whose telephone number is 571-272-6107. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Frederick F. Rosenberger
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